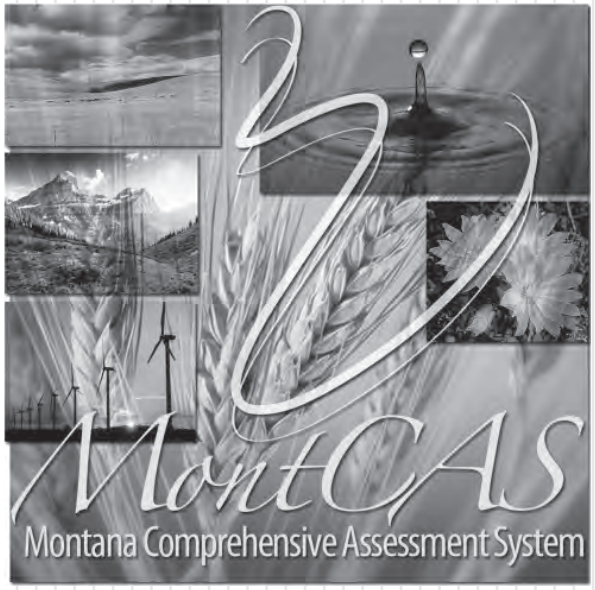
Montana Comprehensive As sess ment System (MontCAS CRT)

Grade 5
Common Released Items
Spring 2010



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Montana
Office of Public Instruction
Denise Juneau, State Superintendent

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Printed in the United States of America.

Reading Directions for Spring CRT

This Reading test contains three test sessions. Mark or write y our ans wers in the Answer Booklet. Use a pencil to mark or write y our ans wers.

This test includes tw o types of questions: multiple-choice and constr ucted-response questions.

For the multiple-choice questions, y ou will be gi ven four ans wer choices—A, B , C, and D . You are to choose the cor rect ans wer from the four choices. Each question has onl y one ans wer. After y ou have chosen the cor rect ans wer to a question, fi nd the question number in y our Answer Booklet and completel y fi ll in the circle for the ans wer y ou chose. Be sure the question number in the Answer Booklet matches the question number in the Test Booklet. The e xample belo w sho ws ho w to completely fi ll in the circle.

CORRECT MARK	INCORRECT MARKS
●	❍ ⊙ ◘ ⊘

If y ou decide to change y our ans wer to a question, erase the wrong mark completel y before fi lling in the circle of the ne w ans wer. Be sure y ou ha ve onl y one ans wer mark ed for each question. **If tw o circles ar e b ubbled in f or the same question, that question will be scor ed as incorr ect.**

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You ma y mak e notes or use highlighters in y our Test Booklet, but y ou must bubb le or write y our fi nal answers in y our Answer Booklet. **Do not mak e an y str ay or unnecessary mar ks in y our Answer Booklet.**

Let's w ork through a sample question to gether to be sure y ou understand the directions.

Sample Question

1. What is the capital of Montana?
   A. Browning
   B. Glendive
   C. Helena
   D. Missoula

Reading

Read this story about a leader in the royal court of ancient China. Then answer the questions that follow.

The Butterfly Robe

A Chinese Folktale

retold by Berta Metzger

The prime minister of China was exhausted with court life.
People were often scheming and grabbing to advance their own cause.
He needed to escape for a while.

So, still dressed in his radiantly beautiful court robes, he climbed into his sedan chair and asked his bearers to carry him up into the hills.

There he got down from his chair and strolled away over the meadow.
The flowers were so beautiful.
He sat down on a stone and reveled in the beauty around him.

Sitting thus, so still . . .
he saw a bee fly from a flower and land on his bright robe.
"Oh! You think my robe is a flower, don't you?
4 Well, here . . . you may have a bit."
And drawing his sword, he cut off a snippet of the fabric and tossed it onto the green grass. "Here, bee! A flower for you!"

Then, laughing, he cut off another piece of the bright fabric.
"Here, bees!
5 Take it if you like it!"
And he tossed this piece high into the air.

The piece of silk floated through the air and landed lightly on an open flower.
Then . . . it rose and began to flutter from flower to flower.

"What is this?"
He cut off another piece and flung it after the first.

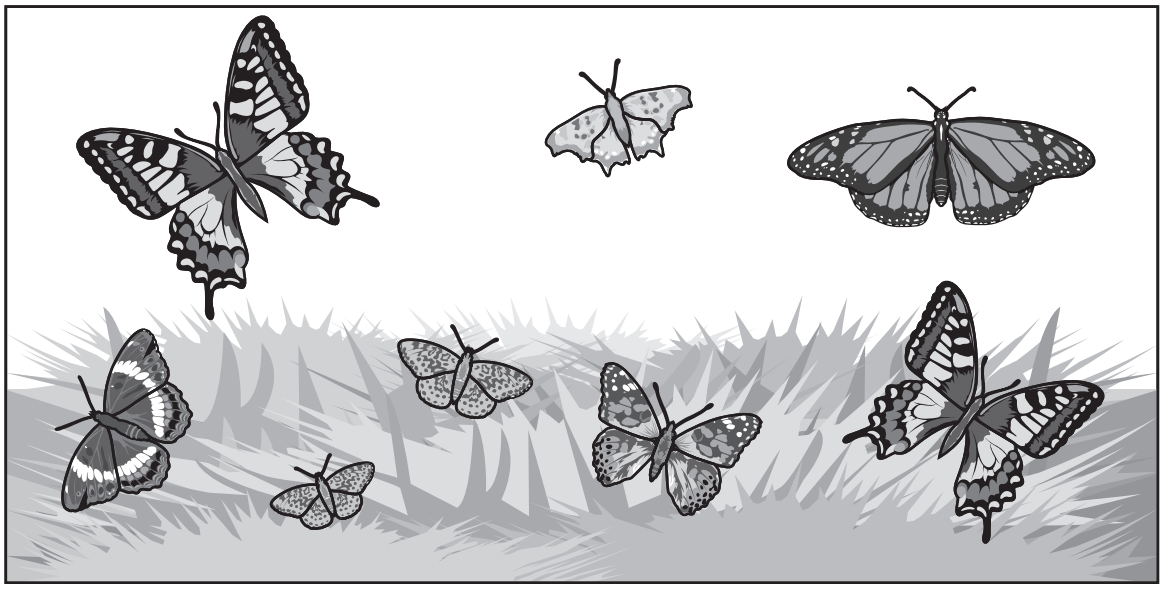
8 And this piece too be gan to float about the f ield,
fluttering beautiful silk en wings.

9 More and more pieces he flung into the air .
And soon the f ield was shimmering with the beautiful creatures.

The prime minister stopped.
He was wearing nothing but the ragged remains of his robe.

11 But the f ield was alive with . . . butterflies.

The prime minister set of f for his home a happ y man.
The tormenting life of the cour t awaited him,
but he was revived now.
He had created something of beauty .
The wonder of that would sustain him the rest of his life.



1. What is the prime minister's **main** problem in the story?

   A. He is being followed by bees.
   B. He destroys his beautiful robe.
   C. He is tired of the people in the court.
   D. He wants to have more power in the court.

2. In paragraphs 4 and 5, how does the prime minister **most likely** feel while he watches the bees?

   A. amused
   B. bored
   C. calm
   D. confused

3. In paragraphs 8 and 9, the author **most likely** uses the words "silken wings" and "shimmering" to show that the

   A. field is very windy.
   B. butterflies are beautiful.
   C. robe seems like a flower.
   D. fabric begins to disappear.

Use the dictionary entry below to answer question 4.

alive *adj* **1.** having life, living: *the proudest person alive* **2.** still in existence as a force: *keep hope alive* **3.** knowing or realizing the existence of: *alive to the danger* **4.** marked by much life or activity, swarming: *trees alive with birds*

4. In paragraph 11, which definition of the word <u>alive</u> is used?

   A. definition 1
   B. definition 2
   C. definition 3
   D. definition 4

5. Why did the prime minister keep cutting pieces from his robe?

   A. He wanted to see more butterflies.
   B. He wanted to practice using his sword.
   C. He did not like the color of his robe.
   D. He did not want any more bees on him.

6. Based on the last paragraph, how will the prime minister **most likely** be affected by his experience?

   A. He will remember the beauty.
   B. He will enjoy life at the court.
   C. He will avoid going to the hills.
   D. He will be tricked by butterflies.

7. Which book would be the **best** source for more stories like this?

   A. *Hiking the Hills of China*
   B. *Studying Bees and Butterflies*
   C. *Mysteries of the Great Wall of China*
   D. *Folktales from Around the World*

Read this passage about making chocolate, and then answer the questions that follow.

Mmmm . . . Chocolate!

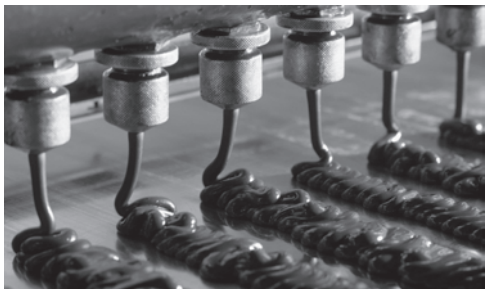
by Alice Boynton and Wiley Blevins

Your favorite chocolate treat doesn't start out so sweet.
Discover how science turns a bitter bean into melt-in-your-mouth chocolate.

Clean the Beans

As the beans dry, farmers remove any dirt and broken pieces they find.

It's Liquid Chocolate!



To create a unique flavor, chocolate makers mix liquid chocolate with different ingredients and then pour or squirt it into molds.

Solid as a Bar

After the liquid chocolate has hardened into a solid bar, it is removed from its mold.

Every year, Americans spend a whopping 1 billion dollars buying treats for their valentines. That's a lot of chocolate hearts!

Though Valentine's Day is a good excuse for a chocolate feast, Americans love this tasty treat year-round. It's no wonder then that chocolate makers spend a lot of time getting chocolate to look and taste just right.

It's a Fruit!

While chocolate may seem like a dream come true, it actually starts out as a fruit that grows on trees. **Cacao** (kuh-KOW) pods—fruits roughly the size and shape of a football—grow on cacao trees in warm regions around the world.

After about six months of soaking up the sun, the pods are ready for harvesting. They are cut down by farmers and then split open. Hidden inside each pod are 20 to 50 purple cacao beans.

The dark beans may look like a tasty treat, but don't pop one in your mouth yet. Raw cacao beans taste **bitter** and are so hard they might chip your tooth! The beans are also covered in a sticky, cream-colored pulp.

Sun Baked

To start the chocolate-making process, farmers prepare the cacao beans for **fermentation** (fur-men-TAY-shun)—a process by which complex sugars are broken down into simpler substances. They scoop out the bean-and-pulp mixture and place it in shallow wooden boxes. Then they cover the boxes with banana leaves and place them out in the sun for about a week. "They stir the mixture around by hand every few days," says Jonathan Haas of the Field Museum of Chicago. The sun's heat—which can raise the temperature of the beans to 125°F—helps **enzymes** (EN-zimes) in the mixture to ferment the beans.

The beans are then dried to keep them from rotting on the long trips to chocolate factories around the world. Farmers lay the beans out to bake in the sun. They check the beans frequently, removing broken ones and cleaning out any dirt. After a few days, the beans have **dehydrated** (dee-HI-dray-tid)—had water removed—and weigh about half as much as they did before. They are then ready to be shipped to factories and made into yummy chocolate.

Hot Chocolate

Ever wonder why different chocolates have different flavors? It's the result of the ingredients added to the chocolate and the method by which the cacao beans are processed. "Every chocolate maker has a secret formula," says Susan Smith of the Chocolate Manufacturers Association.

8

First, the chocolate makers roast the cacao beans. They place them in a hot oven—at least 250°F—up to two hours. Each company has its own special roasting method.

After the beans have cooled, the shells are removed. What's left behind is a chocolate **solid** called a "nib." About half of this nib is cocoa (koh-koh) butter, a naturally occurring fat.

Large discs or blades are then used to crush the nibs. This motion heats the mixture and melts the cocoa butter into a **liquid**. This liquid is the main ingredient in chocolate.

Secret Recipe

Liquid chocolate may sound like something great to gulp, but it is still bitter tasting. "It takes a little getting used to," says Rose Potts, a food scientist from Blommer Chocolate Company. She tests the liquid's flavor to make sure their product is top notch.

12

To make a tastier treat, different amounts of liquid chocolate are mixed with **ingredients** like sugar and milk. Food scientists create the perfect recipe by experimenting with various amounts of each ingredient. They also use cacao beans from different parts of the world, because each region produces beans with their own unique taste.

Once the liquid chocolate is mixed just right, chocolate makers pour it into **molds**, where it sits for about 20 minutes at a temperature of 55°F. This allows the chocolate to harden into the shapes you pop into your mouth.

To make sure every batch of chocolate is just right, Potts and her co-workers have to do a lot of nibbling. You might think they get sick of snacking on chocolate. But they all still love it. "We just become more selective about the chocolate we eat."

8. What is the **main** idea of the first paragraph?

A. Chocolate treats are expensive.
B. Chocolate is a popular treat.
C. People buy too much chocolate.
D. Hearts are the best shapes for chocolate.

9. Which item **most** helps the process of fermentation?

A. banana leaves
B. the sun
C. the wind
D. wooden boxes

10. What would **most likely** happen if cacao beans were not dried before being shipped to chocolate factories?

A. The beans would be too heavy to ship.
B. The beans would spoil during shipping.
C. The beans would be bitter when they arrived.
D. The beans would arrive too early in the season.

11. In paragraph 8, the word method means

A. a way of doing something.
B. an interest in making things.
C. a hot stove for cooking.
D. an idea for a new recipe.

12. In paragraph 12, which is the **best** replacement for the phrase top notch?

A. expensive
B. high quality
C. popular
D. very sweet

13. Which step removes the bitter taste from chocolate?

A. roasting the beans
B. fermenting the beans
C. adding sugar to the liquid
D. pouring the liquid into molds

14. According to the passage, why do food scientists select cacao beans from different parts of the world?

A. to lower the cost of their product
B. to reduce the time for shipping
C. to add variety to their flavors
D. to develop new kinds of trees

15. Food scientists are similar to other scientists because food scientists

A. work for large companies.
B. use many secret ingredients.
C. experiment to find the perfect formula.
D. come from different parts of the world.

16. The author **most likely** uses words like "whopping," "yummy," and "nibbling" to

A. make the reader hungry.
B. make the reader laugh.
C. educate and impress the reader.
D. interest and entertain the reader.

17. Why are some words in the passage printed in **bold** type?

A. They list the ingredients found in chocolate.
B. They name the steps of chocolate making.
C. They are difficult words to spell.
D. They are important words to understand.

18. What is the **most likely** purpose of the passage?

A. to interest readers in becoming food scientists
B. to explain the process of making chocolate
C. to encourage readers to eat more chocolate
D. to explain why chocolate is expensive

19. With which statement would the author **most likely** agree?

A. Chocolate making is a mysterious and confusing process.
B. It is hard to understand why people like chocolate so much.
C. Cacao beans undergo many changes to become chocolate treats.
D. Only a scientist can grow the cacao beans that become chocolate treats.

20. Explain how bitter cacao beans become sweet chocolate treats. Use information from the passage to support your answer.

Scoring Guide

Score	Description
4	Response provides a thorough explanation of how bitter cacao beans become sweet chocolate treats. Explanation includes specific, relevant information from the passage.
3	Response provides an explanation of how bitter cacao beans become sweet chocolate treats. Explanation includes supporting information from the passage, but lacks specificity, relevance, and/or development.
2	Response provides a partial explanation of how bitter cacao beans become sweet chocolate treats. Explanation includes limited information from the passage and/or is partially correct.
1	Response makes a vague or minimal statement of how bitter cacao beans become sweet chocolate treats.
0	Response is totally incorrect or irrelevant.
Blank	No response.

Scoring Notes

A thorough response will include an explanation of how bitter cacao beans become sweet chocolate treats. Information to support this idea may include, but is not limited to, the following:

- Cacao beans are found inside a fr uit, called a pod.
- Once it is ripened b y the sun, the fr uit is pick ed.
- Farmers cut the pod/fr uit open to remo ve the small dark beans inside. At this stage the beans are v ery hard, co vered with stick y stuf f (pulp), and bad-tasting.
- The beans and pulp are fer mented, meaning their comple x sugars are changed into simple sugars. They are co vered and put out in the sun, w hich helps the beans' enzymes perfor m the fer mentation.
- During the fer mentation process the beans are check ed and stir red often.
- After being fer mented, the beans are dried out (deh ydrated) so the y don't rot on the w ay to chocolate factories.
- Once at the f actories, the cacao beans are roasted , cooled, and tak en out of their shells.
- Now the bean is called a nib or chocolate solid. The nib is cr ushed; this melts the f at in it and tur ns it into liquid.
- Once liquid chocolate has been created , food scientists add dif ferent combinations of ing redients (lik e milk and sugar) to s weeten the liquid and come up with delicious treats.
- Once the y get the right fl avor, the y cool the liquid in molds, w hich e xplains the dif ferent shapes that chocolate comes in.

Example of Scor e Point 4

Cacao beans are bitter. Here's how they become the sweet chocolate treats were used to. Farmers will fermenate the beans. Then, the beans get dried so they dont rot while taken to the factories. Farmers let them bake in the sun until the beans are dehydrated. Meanwhile, farmers remove any dirt or broken beans. Chocolate makers roast them for about 2 hours. When the beans cool the shells are removed, leaving a nib or chocolate solid, that are then crushed by large discs or blades. Eventually, the chocolate becomes a liquid. Next, they add sugar and milk to get rid of the bitter taste. Mixture is then poured into molds to harden.

And now you have, sweet chocolate.

Example of Scor e Point 3

The cacao bean is bitter and hard. Because it came from a fruite size of a football. The farmers take the bean from it. Then they put it in the sun and mixe it a few days. They ship it to a chocolate company. They clean them get the broken one and dirt. Grab the shells put them away. The cacao bean is crush. So it can put others thing So it is liquid chocolate put sugar and milk in it. After that they cool them off to 55°F. So it is a chocolate bar.

Example of Scor e Point 2

First cacao pods are haversted then the beans are fermented. Next they go the factories and became liquid. Then ingredients are added to made a sweet taste. Finally they are placed into molds and harden. That's when they are ready to be eaten.

Example of Scor e Point 1

They crush the nibes add suger, milk. Put them in moldes.

Example of Scor e Point 0

Bitter cocao beans become Sweet Chocolate treats Because they are ra cocoa beans and they are done right on time Some aren't done at the Same time So the cocao beans tast So good and Swed.

Read this passage about the rings in a tree. Then answer the questions that follow.

What Do Rings in a Tree Show?

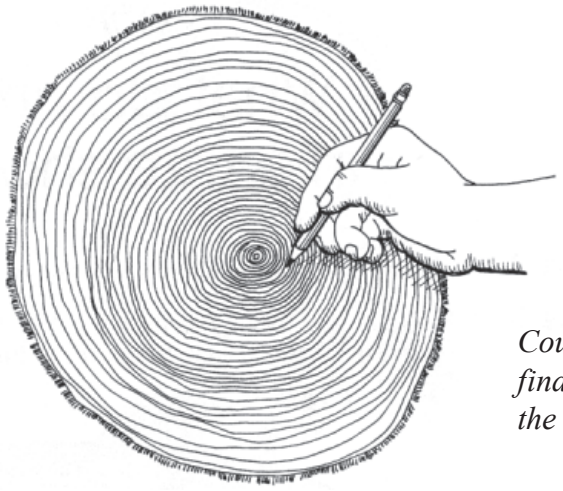
by Robert W. Wood

Materials

The trunk of a tree that has been cut down or a tree stump

Procedure

1. Look closely at the rings in the trunk. You should see dark rings separated by lighter bands. Notice the width of some of the bands.
2. Begin at the center and count a light band and a dark ring as one year.



Count the rings to find the age of the tree.

Results

Just under the bark of the tree is a layer of growing tissue called *cambium*. Cambium is made up of living cells that add a new ring of wood to the trunk each year. This way the trunk, roots, and branches grow thicker. When you count the rings, start at the center ring, which was the tree's first year of growth. The dark ring shows the growth in summer and the light band shows the growth in spring.

As you count outward from the center, you might discover that some rings are closer together than others. Where the rings are close together, it shows when the tree grew more slowly as it was competing with other plants and trees for sunlight, minerals, and water. If no other trees were close by while the tree was growing, the bands should be wider, showing a faster rate of growth.

2

Weather also affects the growth of trees. During dry years, the bands are narrow, showing that the tree grew more slowly. If the tree was able to reach its full size, the growth slows again and the bands become narrower.

The wood inside the trunk is filled with small pipe-like cells. These cells provide connections through which sap from the roots can rise. The layers of living cells (the *phloem*) just inside the
4 bark carry food from the leaves to all parts of the tree. The trunk acts like a two-lane road. Sap moves up inside the trunk through tiny pipes in the wood. Food travels down outside the wood just under the bark.

Further Studies

- ❑ Rings in the tree can tell you the tree's life story. Can you find any signs in the trunk where the tree was damaged by insects or decay? How long did your tree live? Will a tree die if the bark is cut through to the wood all the way around the trunk? Is the tree's food supply cut off?

Did You Know?

- ❑ Redwood trees are the tallest plants on earth. They can grow more than 300 feet (91.5 meters) high, or about as high as a 30-story building.
- ❑ Before a law was passed that protected sequoia trees, a certain giant sequoia was cut down. By counting the rings, it was found that the tree dated back to 1305 B.C.
- ❑ Trees never stop growing as long as they live.

21. To count the rings in a tree tr unk, you should start

    A. in the middle.
    B. at the outer edge.
    C. near the branches.
    D. with the widest bands.

22. In paragraph 2 of the section called **Results**, the word competing means

    A. being bigger than.
    B. having to move.
    C. leaning toward.
    D. trying to win.

Use the dictionary entry below to answer question 23.

rate *n* **1.** an amount or quantity (speed) **2.** the cost per unit (price) *v* **3.** to be qualified **4.** to give a grade or score

23. In paragraph 2, which definition of the word rate is used?

    A. definition 1
    B. definition 2
    C. definition 3
    D. definition 4

24. Narrow bands in a tree tr unk show years of little

A. damage.
B. rainfall.
C. soil.
D. wildlife.

25. A tree that has mostl y wide bands is one that

A. died early.
B. grew quickly.
C. stayed small.
D. was cut down.

26. In parag raph 4, the description of the tree trunk as "a tw o-lane road" helps sho w

A. the color of the tree bark.
B. how far apart the tree rings are.
C. how fluids move through the tree.
D. the direction in w hich the tree g rows.

27. The author **most lik ely** included the **Did You Know?** section to

A. entertain the reader with humorous stories.
B. challenge the reader with diffi cult questions.
C. convince the reader with strong opinions.
D. interest the reader with sur prising details.

Mathematics Directions for Spring CRT

This Mathematics test contains three test sessions. Mark or write y our ans wers in the Answer Booklet. Use a pencil to mark or write y our ans wers.

This test includes three types of questions: multiple-choice, shor t-answer, and constr ucted-response questions.

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CORRECT MARK	INCORRECT MARKS
●	❍ ⊙ ◘ ⊘

If y ou decide to change y our ans wer to a question, erase the wrong mark completel y before fi lling in the circle of the ne w ans wer. Be sure y ou ha ve onl y one ans wer mark ed for each question. **If tw o circles ar e b ubbled in f or the same question, that question will be scor ed as incorr ect.**

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You ma y mak e notes or use highlighters in y our Test Booklet, but y ou must bubb le or write y our fi nal answers in y our Answer Booklet. **Do not mak e an y str ay or unnecessary mar ks in y our Answer Booklet.**

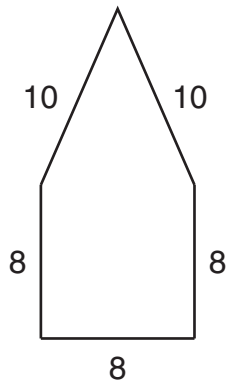
Let's w ork through a sample question to gether to be sure y ou understand the directions.

Sample Question

1. What is the capital of Montana?
   A. Browning
   B. Glendive
   C. Helena
   D. Missoula

Mathematics (No Calculator)

1. Look at the polygon below.



Which expression shows how to find the perimeter of this polygon?

A. $8 + 10$

B. 8×10

C. $8 \times 8 \times 8 \times 10 \times 10$

D. $8 + 8 + 8 + 10 + 10$

2. The owner of a pet store wants to know the types of dogs her customers own. Which group would be **best** for the store owner to survey?

A. all the people who buy dog food at the store

B. all the people who work at the store

C. all the people who own pet stores in town

D. all the people who walk by the store

3. Mr. Johnston needs $\frac{3}{4}$ of a cubic foot of sand. What decimal is equivalent to $\frac{3}{4}$?

A. 0.25

B. 0.3

C. 0.34

D. 0.75

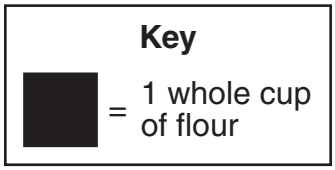
4. Eliza's answer to a problem is shown below.

$$187 \div 12 = 15 \text{ Remainder } 7$$

Which expression can Eliza use to check her answer?

A. $(12 \times 15) + 7$
B. $(12 \times 15) - 7$
C. $(12 + 7) \times 15$
D. $(12 - 7) \times 15$

5. Mary used some flour to make a cake and muffins. She used a total of $5\frac{3}{4}$ cups of flour. Which model shows the amount of flour Mary used?



A. 

B. 

C. 

D. 

6. The largest pumpkin at a county fair weighed 571.108 pounds. The second largest pumpkin weighed 325.63 pounds. How much more did the largest pumpkin weigh than the second largest pumpkin?

A. 154.538 pounds
B. 245.478 pounds
C. 538.545 pounds
D. 896.738 pounds

7. A chef is baking 15 dozen cookies. He wants to mentally calculate the total number of cookies. Which number sentence can the chef use to mentally calculate?

A. $15 \times 12 = (15 + 10) + (15 + 2)$
B. $15 \times 12 = (15 + 10) \times (15 + 2)$
C. $15 \times 12 = (15 \times 10) \times (15 \times 2)$
D. $15 \times 12 = (15 \times 10) + (15 \times 2)$

8. Ali types an average of 45 words in one minute. Which expression can be used to find the number of words she types in m minutes?

   A. $45 - m$
   B. $45 + m$
   C. $45 \div m$
   D. $45 \times m$

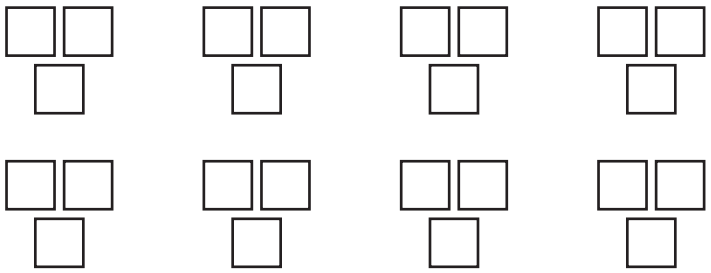
9. Karen bought 66 ounces of ground beef for a cookout. About how many pounds of ground beef did she buy?

   A. 5
   B. 4
   C. 3
   D. 2

10. What is the next number in the pattern below?

    0.3, 0.9, 2.7, 8.1, 24.3, 72.9, ?

11. The seating chart below shows the desks in Ms. Blake's class. One student sits at each desk.



In Ms. Blake's class, $\frac{5}{8}$ of the students are girls.

a. What **fraction** of the students in Ms. Blake's class are boys?

b. How many students in Ms. Blake's class are girls? Show or explain how you found your answer.

Ms. Blake got a new student, and now $\frac{3}{5}$ of the students are girls.

c. Is the new student a girl or boy? Show or explain how you found your answer.

Scoring Guide

Score	Description
4	4 points
3	3 points
2	2 points
1	1 point
0	Response is incorrect or contains some correct work that is irrelevant to the skill or concept being measured.
Blank	No response.

Scoring Notes

Part a: 1 point — correct answer, $\frac{3}{8}$, or equivalent fraction

Part b: 2 points — correct answer, **15**, with work shown or explanation given
or
correct answer based on incorrect answer in part a, with work shown or explanation given

OR

1 point — correct answer without appropriate work shown or explanation given
or
correct strategy with an incorrect or missing answer

Part c: 1 point — correct explanation

Sample Responses:

Part b: There are 24 students and $\frac{5}{8}$ of 24 is 15.

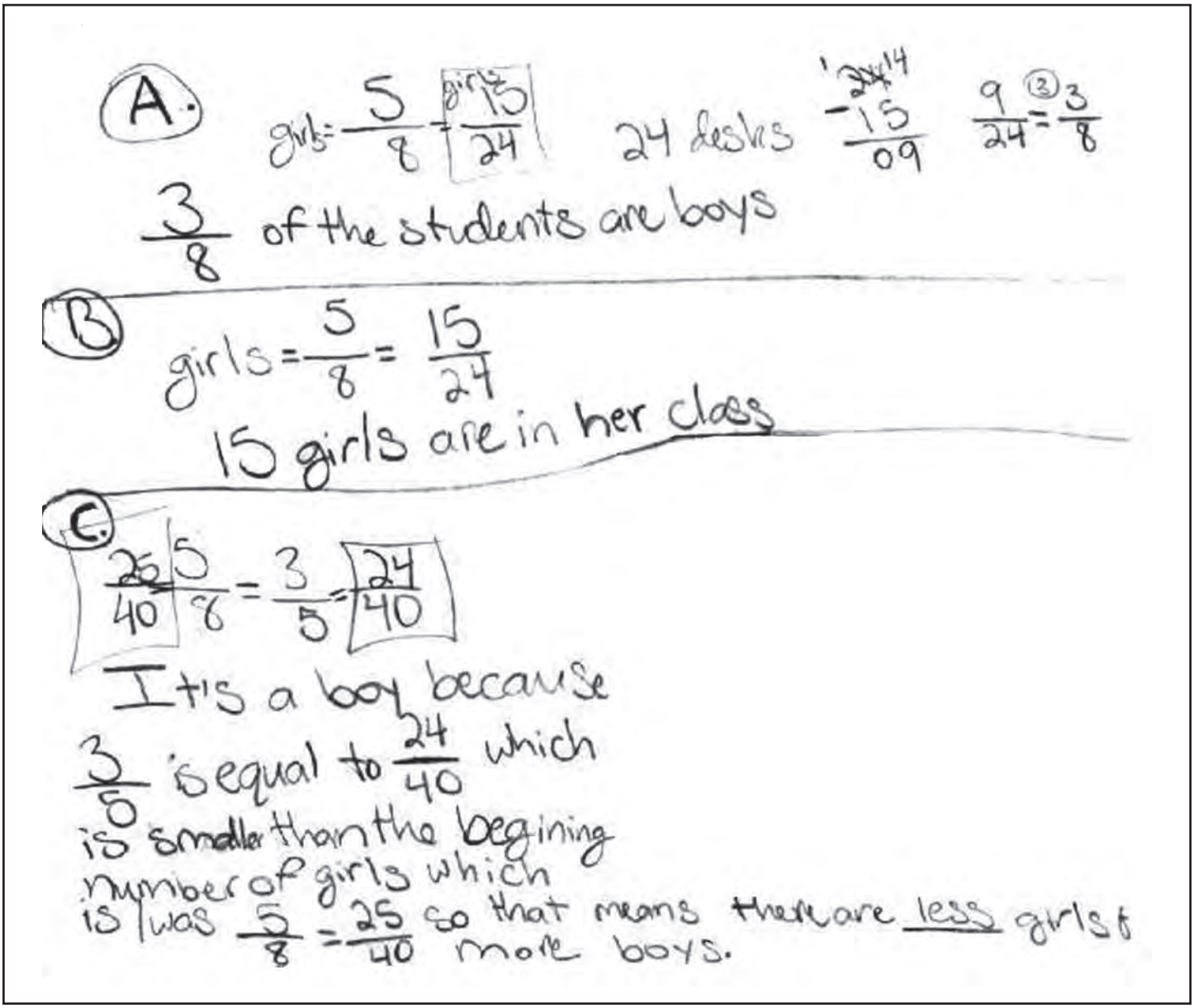
Part c: If you add a girl, $\frac{16}{25}$ of the class would be girls, which does not simplify to $\frac{3}{5}$.

or

If you add a boy, $\frac{10}{25}$ of the class would be boys, and $\frac{15}{25}$ of the class would be girls, and $\frac{15}{25}$ simplifies to $\frac{3}{5}$.

Example of Scor e Point 4

Sample 1



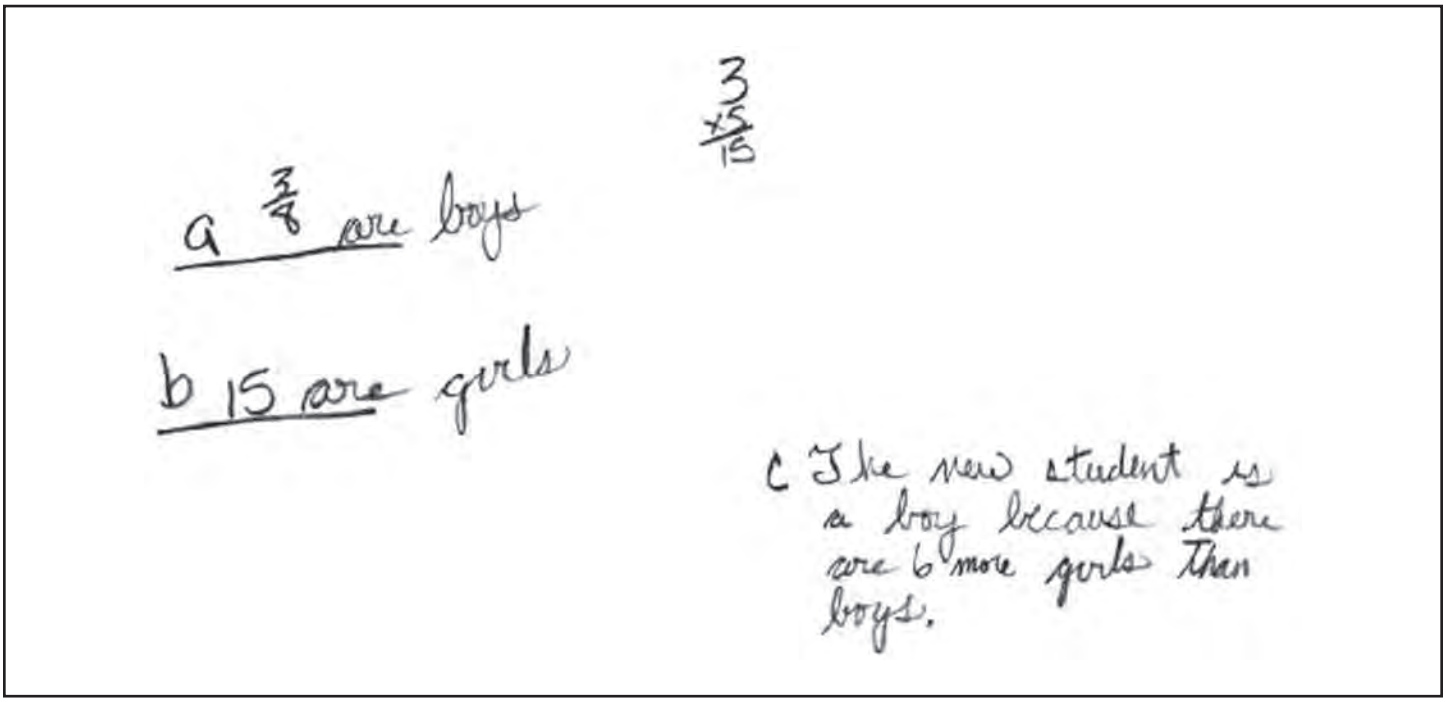
Example of Scor e Point 4

Sample 2

$\frac{3}{8}$ of the class are boys. 15 girls are in Ms. Blakes class, because if there 3 desks in a row, and $\frac{5}{8}$ are girls than do $3 \times 5 = 15$ girls. The new student would be a Boy, because there is 25 students, and $\frac{3}{5}$ of them are girls so $3 \times 5 = 15$ girls, so 10 are boys, because $\frac{5}{5} - \frac{3}{5} = \frac{2}{5}$ are boys.

Example of Scor e Point 3

Sample 1



Example of Scor e Point 3

Sample 2

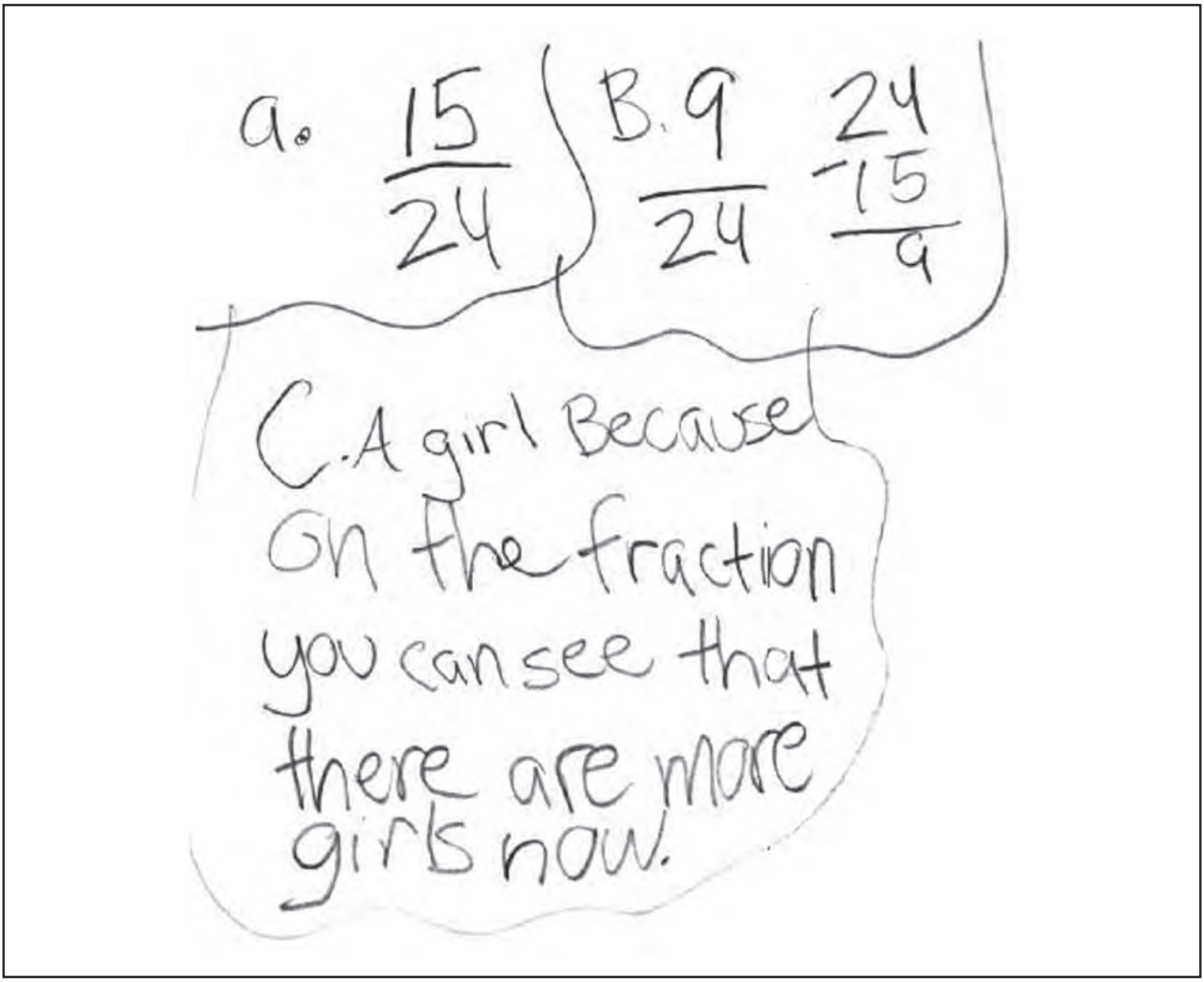
A. $\frac{3}{8}$

B. 15, I figured it out by counting how many rows and there were 3 then I counted 15 desks in 5 rows.

C. It is a boy because the fraction of girls went down and the fraction of boys probably went up.

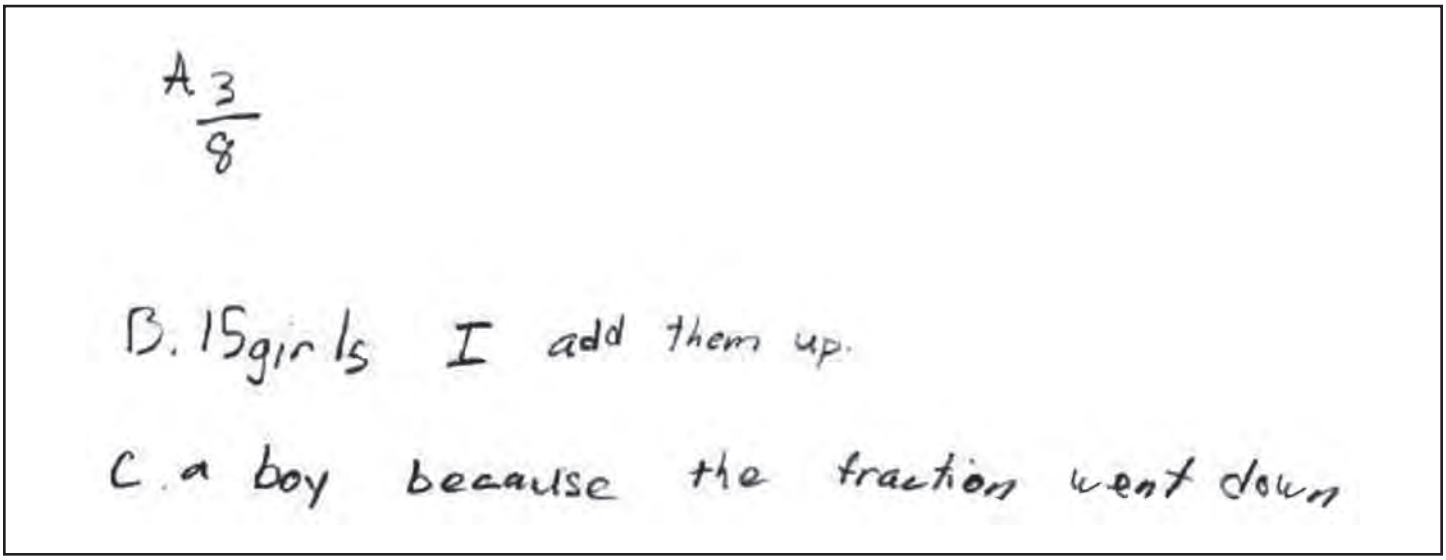
Example of Scor e Point 2

Sample 1



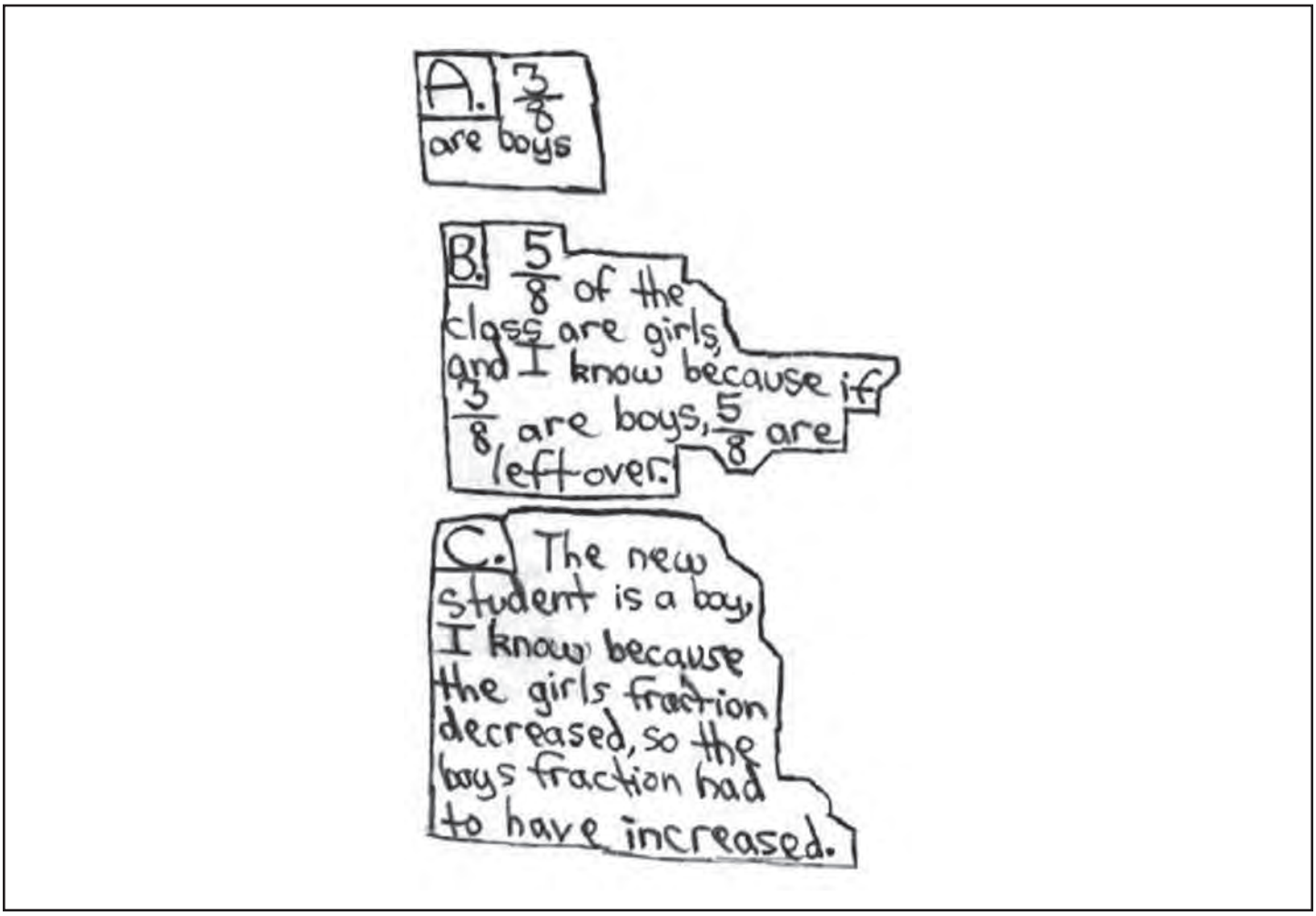
Example of Scor e Point 2

Sample 2



Example of Scor e Point 1

Sample 1



Example of Scor e Point 1

Sample 2

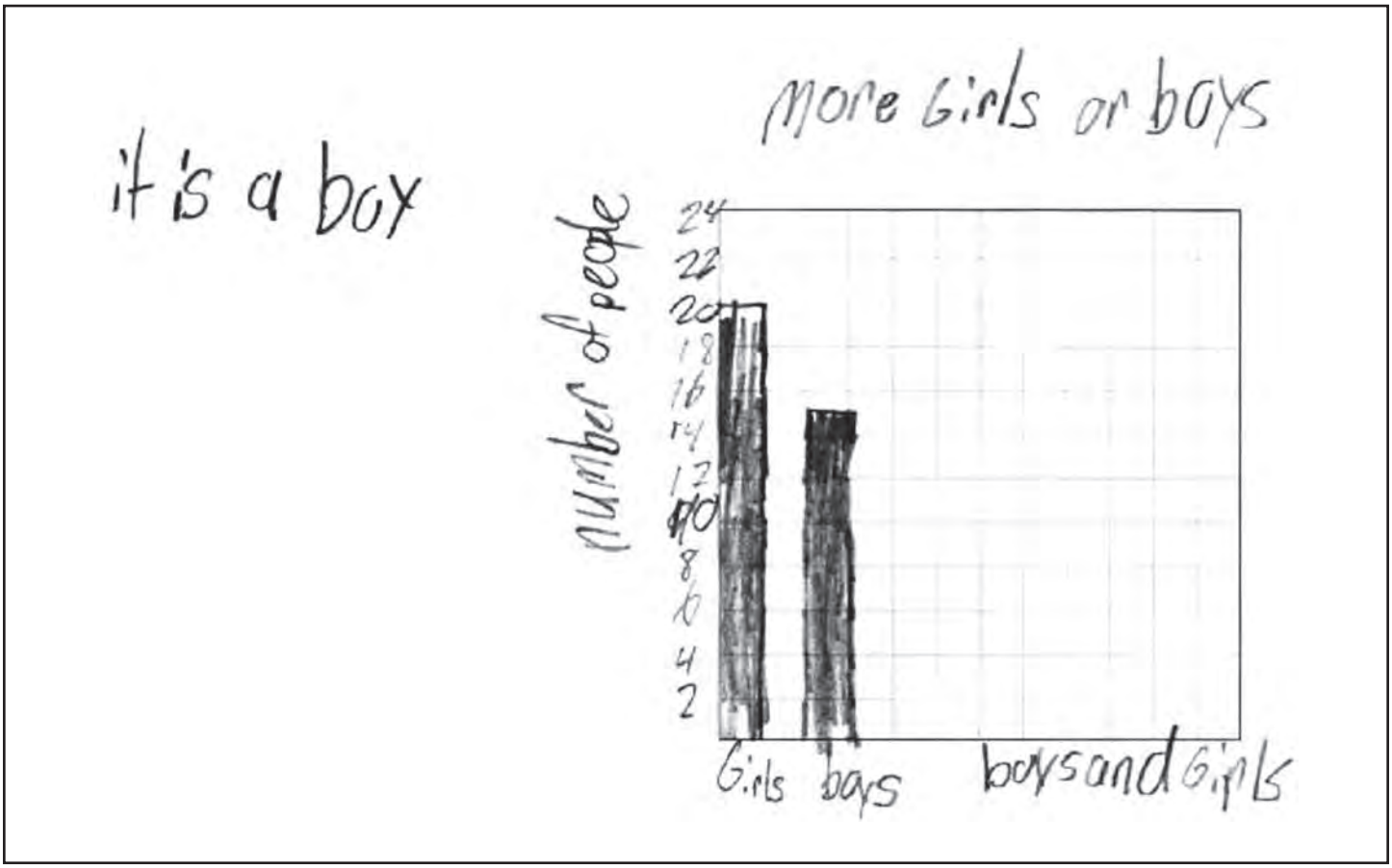
a. 10 boys

b. 15 girls

C. a boy it made the girl numbers go down.

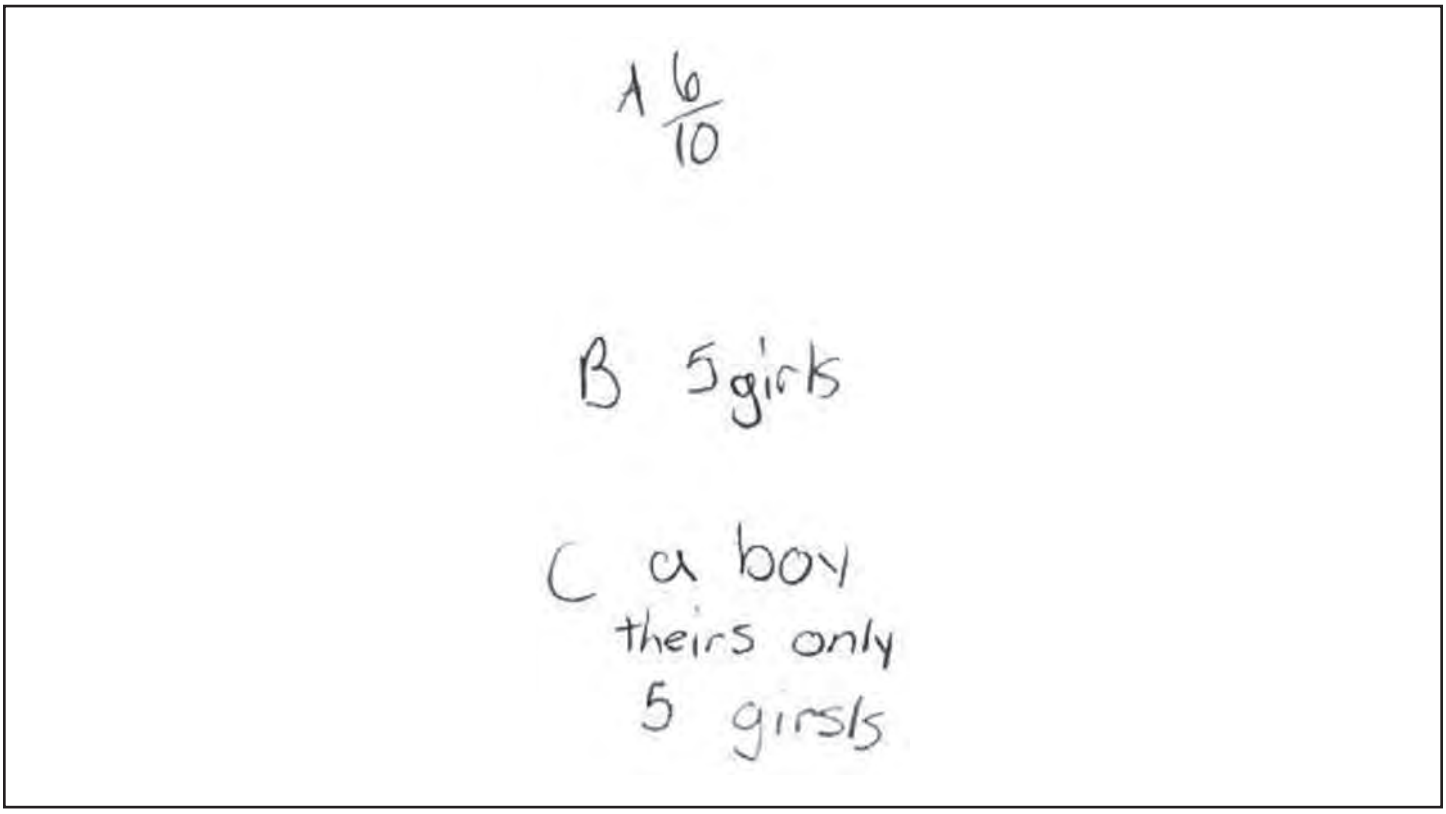
Example of Scor e Point 0

Sample 1

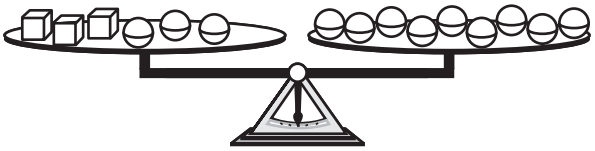


Example of Scor e Point 0

Sample 2



12. The scale shown below is balanced.



Which sentence is true?

A. ▢ = ⊖

B. ▢ = ⊖ ⊖

C. ▢ = ⊖ ⊖ ⊖ ⊖

D. ▢ = ⊖ ⊖ ⊖ ⊖ ⊖ ⊖

13. At a restaurant, Zack can choose from 3 different kinds of salad and 4 different kinds of salad dressing. How many different ways can he choose one salad and one salad dressing?

A. 7

B. 9

C. 12

D. 15

14. The table below shows the lengths of four hiking trails.

Trail Name	Trail Length
Oak Trail	$1\frac{1}{2}$ miles
River Trail	$1\frac{3}{4}$ miles
Sunset Trail	$1\frac{7}{10}$ miles
Maple Trail	$1\frac{2}{5}$ miles

Which trail is the **longest**?

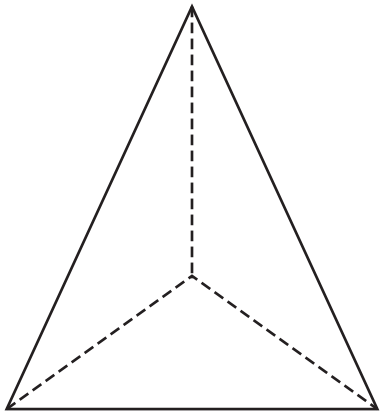
A. Oak Trail

B. River Trail

C. Sunset Trail

D. Maple Trail

15. Look at the three-dimensional figure shown below.



How many faces does this figure have?

A. 3

B. 4

C. 5

D. 6

16. A punch recipe needs 5 cups of g rape juice for e very 3 cups of lemon-lime soda. Which table sho ws the cor rect combinations of amounts of g rape juice and lemon-lime soda?

A.

Punch Recipe

Cups of Grape Juice	Cups of Lemon-Lime Soda
5	3
6	4
7	5

B.

Punch Recipe

Cups of Grape Juice	Cups of Lemon-Lime Soda
5	3
10	6
15	9

C.

Punch Recipe

Cups of Grape Juice	Cups of Lemon-Lime Soda
5	3
7	5
9	7

D.

Punch Recipe

Cups of Grape Juice	Cups of Lemon-Lime Soda
5	3
6	2
7	1

17. Four students in the same class used sticks of dif ferent lengths to measure the distance from their classroom doorw ay to the w ater fountain. The measurements are sho wn in the table belo w.

Distance from Doorway to Fountain

Student Name	Number of Stick Lengths
Andrew	34
Brent	60
Colin	21
Dean	63

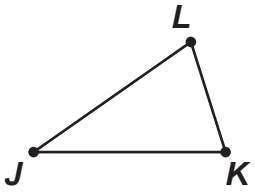
Who has the shor test stick?

A. Andrew
B. Brent
C. Colin
D. Dean

18. Sally collected $2.50 for each bo x of cookies she deli vered. She deli vered 120 bo xes of cookies. Ho w much mone y did Sall y collect altogether?

A. $290
B. $300
C. $400
D. $840

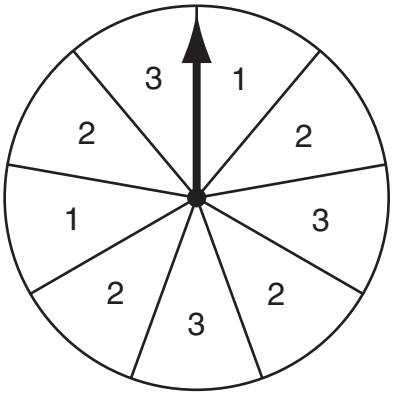
19. Look at the triangle belo w.



Which is another w ay to name $\angle K$?

A. $\angle KJL$
B. $\angle LJK$
C. $\angle JLK$
D. $\angle JKL$

20. The spinner sho wn belo w is di vided into nine equal sections.



Joey will spin the ar row once. What is the probability the ar row will land on the number 2?

A. $\frac{1}{9}$
B. $\frac{4}{9}$
C. $\frac{1}{2}$
D. $\frac{4}{5}$

21. Blake w ants to di vide the rectangle belo w into tw o cong ruent shapes.

Which could **not** be the tw o shapes?

A. rectangles
B. right triangles
C. squares
D. acute triangles

22. What is the v alue of y in the equation belo w?

$y + 10 + 12 = 39$

23. The sunrise one da y was at 5:42 A.M. The sunset was at 8:37 P.M. What was the amount of time from sunrise to sunset?

A. 13 hours 5 minutes
B. 13 hours 55 minutes
C. 14 hours 5 minutes
D. 14 hours 55 minutes

24. A scientist made the tab le below to sho w the weights of four chickadees.

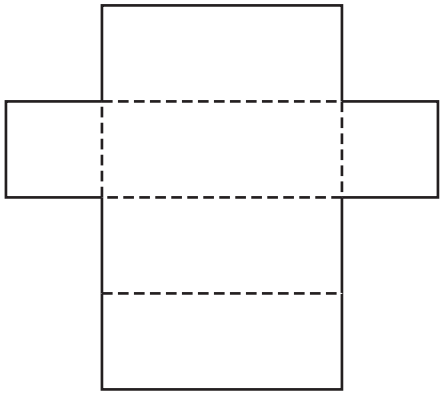
Chickadee	Weight
1	0.32 ounces
2	0.408 ounces
3	0.48 ounces
4	0.379 ounces

Which chickadee w eighs the **most**?

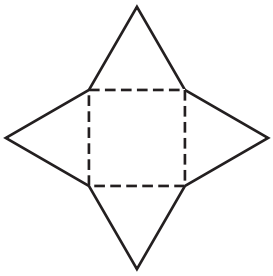
A. Chickadee 1
B. Chickadee 2
C. Chickadee 3
D. Chickadee 4

25. Which pattern (net) is for a rectangular prism?

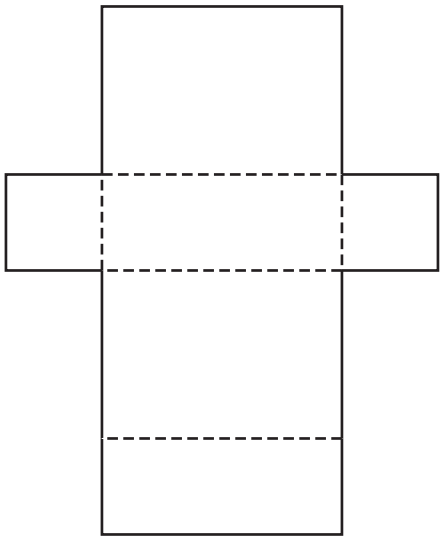
A.



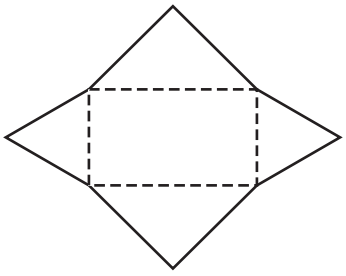
B.



C.



D.



26. The table below shows the top speeds of five roller coasters.

Top Speeds of Roller Coasters

Roller Coaster	Top Speed (in miles per hour)
Twister	59
Double Loop	64
Canyon	57
River Run	63
Rocky	57

What is the mean (average) top speed, in miles per hour, of these roller coasters?

A. 57 miles per hour
B. 59 miles per hour
C. 60 miles per hour
D. 75 miles per hour

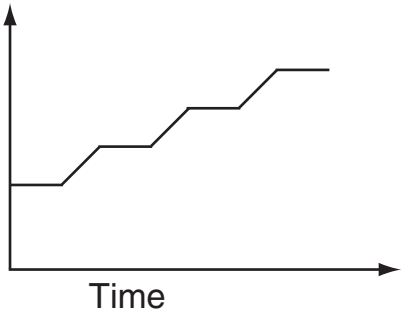
27. In the two equations below, x represents the same number and y represents a different number.

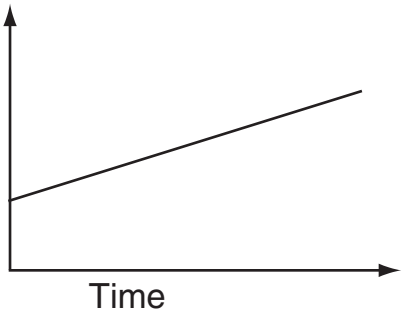
$$x + x = 50$$
$$x + y = 37$$

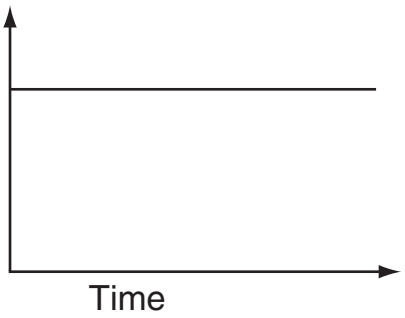
What number does y represent?

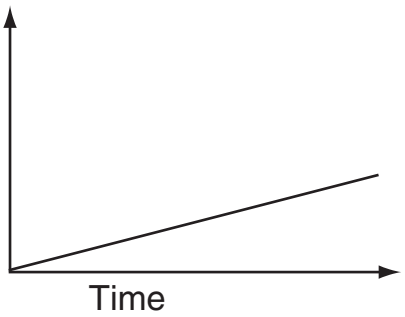
A. 12
B. 13
C. 25
D. 62

28. Ten years ago, Cityville's population was 5,087. Over the last 10 years, the population has increased at a constant rate of about 350 people each year. Which graph **best** represents Cityville's population during the last 10 years?

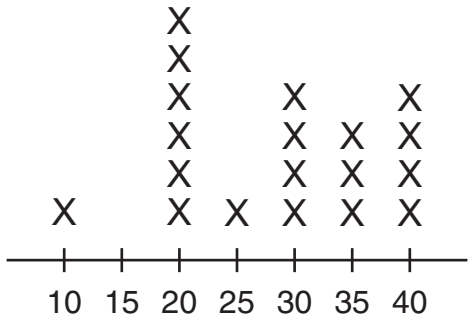
A. 

B. 

C. 

D. 

29. The line plot below shows the number of minutes each band member practiced on Tuesday.

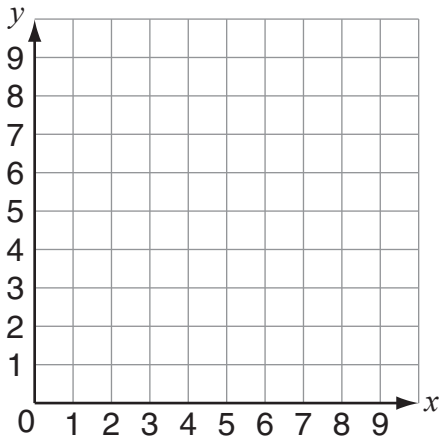


Number of Minutes Practiced on Tuesday

How many band members practiced 30 minutes or **more** on Tuesday?

A. 4
B. 7
C. 11
D. 12

30. You may use the coordinate grid below to help you answer this question.



On a coordinate grid, point *G* is located at (3, 4) and point *H* is located at (3, 9). What is the distance, in units, between point *G* and point *H*?

A. 0
B. 5
C. 6
D. 9

Acknowledgments

Measured Progress and the Montana Office of Public Instruction wish to acknowledge and credit the following authors and publishers for use of their work in the Montana Comprehensive Assessment System—2010.

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